



Nations Environmental &  
Engineering Services, Inc.

July 24, 1994

Mr. Larry Coble  
Regional Supervisor  
North Carolina DEHNR  
8025 North Point Boulevard, Suite 100  
Winston-Salem, NC 27106-3203

RECEIVED  
N.C. Dept. of EHNR

JUN 08 1998

Winston-Salem  
Regional Office

Re: Assessment & Remedial Summary  
Norfolk & Western Railway Company (NW)  
Underground Storage Tank System  
5031 Old Walkertown Road (Baker Lot)  
Facility ID No. 0-015171  
Winston-Salem, NC  
NW ID #'s 013-01IM

Dear Mr. Coble:

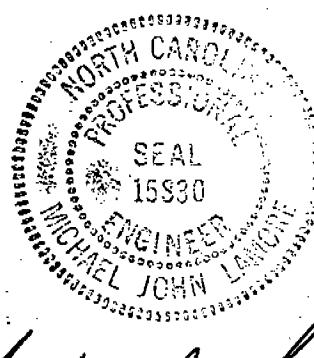
Nations Environmental & Engineering Services, Inc. (Nations), a registered North Carolina Professional Corporation, has reviewed the attached assessment & remedial summary at the above referenced location on behalf of Environmental Technology of North America, Inc. (ETI). As the professional in responsible charge, the assessment was completed using acceptable technical practices consistent with North Carolina Division of Environmental Management (DEM) laws, regulations, and guidelines.

Please call if there are any questions.

Sincerely,

Michael J. Lamore, PE  
President

enclosures





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**Environmental Technology  
of North America, Inc.**

A HazWaste Company

July 24, 1994

Mr. Larry Coble  
Regional Supervisor  
North Carolina DEHNR  
8025 North Point Boulevard, Suite 100  
Winston-Salem, NC 27106-3203

Re: Assessment & Remedial Summary  
Norfolk & Western Railway Company (NW)  
Underground Storage Tank System  
5031 Old Walkertown Road (Baker Lot)  
Facility ID No. 0-015171  
Winston-Salem, NC  
NW ID #'s 013-01IM

Dear Mr. Coble:

Per your March 11, 1994 Notice of Regulatory Requirements regarding the above referenced project, Environmental Technology of North America, Inc. (ETI) has completed the site assessment and subsequent soil remediation at the site. The following chronological outline provides a history of the site from the UST closure report submittal to the resulting corrective action.

- On October 03, 1990, ETI prepared a closure report indicating a petroleum release from an underground storage tank system (UST) located on the property of the Norfolk and Western Railway Company's (NW) Baker Lot at 5031 Old Walkertown Road in Winston-Salem, NC. TPH concentrations of 4129.0 ppm remained in the excavation at the south end of UST 0-015171-1.
- On March 11, 1994, NCDEHNR issued a Notice of Regulatory Requirements (NORR) in response to information received by their office on November 05, 1992, concerning the above mentioned petroleum release.
- Also on March 11, 1994, NCDEHNR contacted NW to determine the disposition of the stockpiled soil generated from the UST removal. Maximum TPH concentrations noted from the stockpiled soils was 244.0 ppm. The closure report indicated that on-site bioremedial treatment was initiated.
- On March 28, 1994, ETI was contracted by NW to perform the initial site assessment of the subject site and to determine the disposition of the TPH contaminated soils generated during the UST removal.

311-J SOUTH WESTGATE DRIVE • GREENSBORO, NORTH CAROLINA 27407  
TELEPHONE 910-299-9998 • EMERGENCY 800-228-SPIL  
FAX 910-299-0655

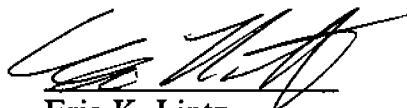
ATLANTA • BOWLING GREEN • EDISON • GREENSBORO • NEW CASTLE • RICHMOND • ROANOKE • WOODBRIDGE

- Upon further review, ETI determined the stockpiled soils in question were commingled on-site and placed around and within the former 10,000 gallon UST excavation. No confirmation sampling of on-site bioremediation treatment was performed. Therefore, during installation of Monitoring Well No. 1 (MW-1) on April 14, 1994, soil samples were collected within and below the original backfilled material. Subsequent soil analyses indicated elevated TPH 3550 and 5030 concentration of 1730.0 ppm and 1270.0 ppm respectively within the original backfilled material (5' to 7' below grade). TPH 3550 and 5030 concentrations below the original backfilled area (15' to 17' below grade) were reported at 60.0 ppm and 48.0 ppm respectively, thus, effectively delineating the vertical extent of soil contamination within the unsaturated zone. (See soil samples MW-1 (5'-7') and MW-1 (15'-17')).
- Subsequent groundwater analyses indicated below 2L concentrations of all EPA 602 and 610 parameters. The depth to groundwater at MW-1 was recorded at 26.80' on April 25, 1994.
- NW elects to excavate petroleum contaminated soils within and proximate to the original UST excavation area, then resample excavation and stockpiled soils.
- On April 28, 1994, ETI contacted Mr. Michael Linscott in the Fayetteville Regional Office to request approval to treat petroleum contaminated soils at their bioremediation facility in Fayetteville, NC (Permit # SR0600043).
- On May 3, 1994, Mr. Linscott granted permission to accept and treat 160 cubic yards of contaminated soil at the above mentioned bioremediation facility generated at 5031 Old Walkertown Road.
- On May 5, 1994, ETI excavated approximately 145 tons of petroleum contaminated soils from the former UST excavation and staged the soil on-site for future transport and disposal (Note: MW-1 was abandon & destroyed). Excavated soils were continually field screened via OVA to help determine the extent of contamination. Field screening indicated that no additional hydrocarbon contamination was present below  $\pm$ 13', therefore, excavation was terminated and confirmation grab soil samples were collected from the base of the excavation (See soil samples SS-1 & SS-2). In addition, a composite soil sample was collected from the stockpiled soils (See soil sample SS-3). All samples were submitted to a state-certified laboratory for analysis of TPH utilizing methods 3550 and 5030. The excavation was backfilled with clean off-site borrow. Subsequent laboratory analysis of the soil samples collected from the base of the excavation (SS-1 & SS-2) indicated below state action limit concentrations of the target parameters. Subsequent laboratory analysis of the soil sample collected from the stockpiled soils indicated TPH 3550 concentrations of 3296.0 ppm.
- On May 25, 1994, ETI transported the 145 cubic yards excavated from the former 10,000 gallon UST area to their bioremediation facility in Fayetteville, NC.

Attached are all letters, analytical results, chain-of-custodies, boring logs, well construction diagrams, maps, manifests, and certificates of acceptance regarding the site subsequent to the UST closure.

In summary, ETI believes that the subject release has been effectively assessed and remediated. No further action should be required by Norfolk & Western Railway Company at this site. Please call if you have any questions.

Sincerely,



Eric K. Lintz  
Project Manager/Staff Geologist



Eric A. Ewald  
Engineer-in-Training

Enclosures

EKL/EAE/ekl/eae

cc: Jerome Williams (Norfolk & Western Railway Company)

## **Vicinity & Site Maps**

**NS**

ENVIRONMENTAL TECHNOLOGY OF  
NORTH AMERICA, INC.

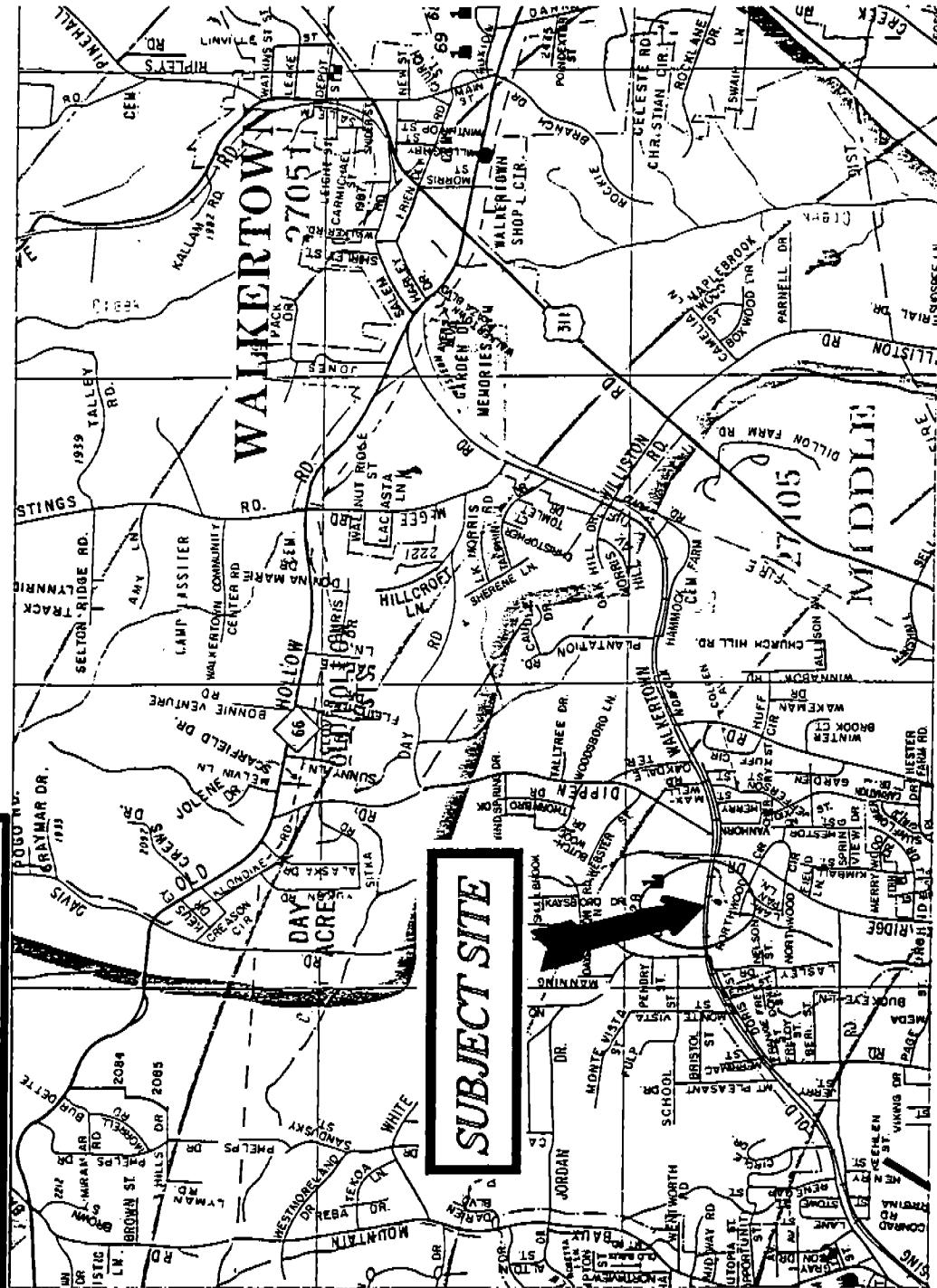
311-1 SOUTH WESTGATE DRIVE  
GREENSBORO, NORTH CAROLINA

Project Manager EKL Job Number: CO1355

Technician EKL Scale: as shown

Reviewer MUL FIGURE 1

## VICINITY MAP



N

**ENVIRONMENTAL TECHNOLOGY OF  
NORTH AMERICA, INC.**



511-S SOUTH WESTGATE DRIVE  
GREENSBORO, NORTH CAROLINA

NORFOLK & WESTERN  
RAILWAY COMPANY

5031 OLD WALKERTOWN RD  
WINSTON-SALEM, NC

B-1

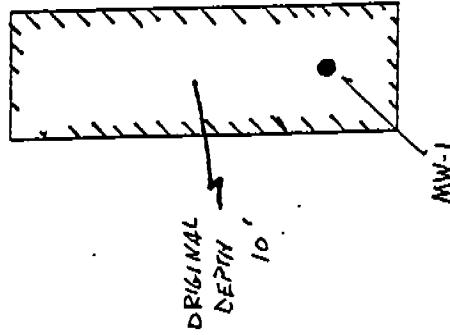
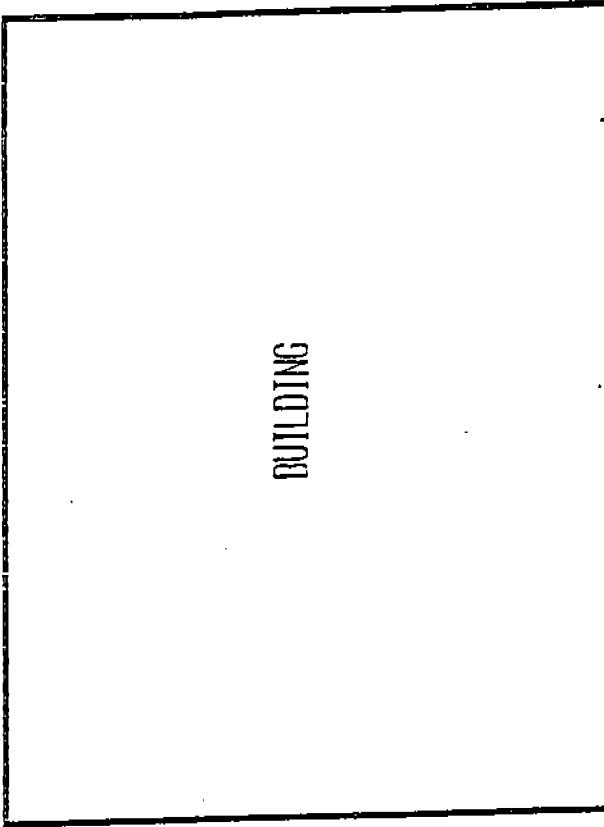
Project Manager EKL Job Number: C01339

Technician EKL Scale: as shown

Reviewer MJL

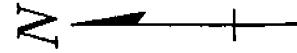
By: EKL

**SITE MAP, PRE-REMEDIAL ACTIVITIES**



Location	Sample Date (dd/mm/yy)	Sample No.	Sample Depth (feet)	TRI (350) (cm)	TRI (1010) (cm)	Comments
NW-1	04/14/94	MW-1 (5'-7')	5'-7'	1730.0	1270.0	OVA > 1000 units
	04/14/94	MW-1 (15'-17')	15'-17'			
B-1	04/14/94	B-1 (5'-7')	5'-7'	60.0	48.0	OVA = 50 units
	04/14/94	B-1 (10'-12')	10'-12'			

Location	Sample Date (dd/mm/yy)	Sample No.	Sample Depth (feet)	TRI (350) (cm)	TRI (1010) (cm)	Comments
NW-1	04/14/94	MW-1 (5'-7')	5'-7'	9.0	9.0	BDI OVA = 2 units
	04/14/94	B-1 (10'-12')	10'-12'			
B-1	04/14/94	B-1 (5'-7')	5'-7'	9.0	9.0	BDI OVA = 20 units
	04/14/94	B-1 (10'-12')	10'-12'			



APPROXIMATE SCALE



**ENVIRONMENTAL TECHNOLOGY OF  
NORTH AMERICA, INC.**

311-4 SOUTH WESTGATE DRIVE  
GREENSBORO, NORTH CAROLINA

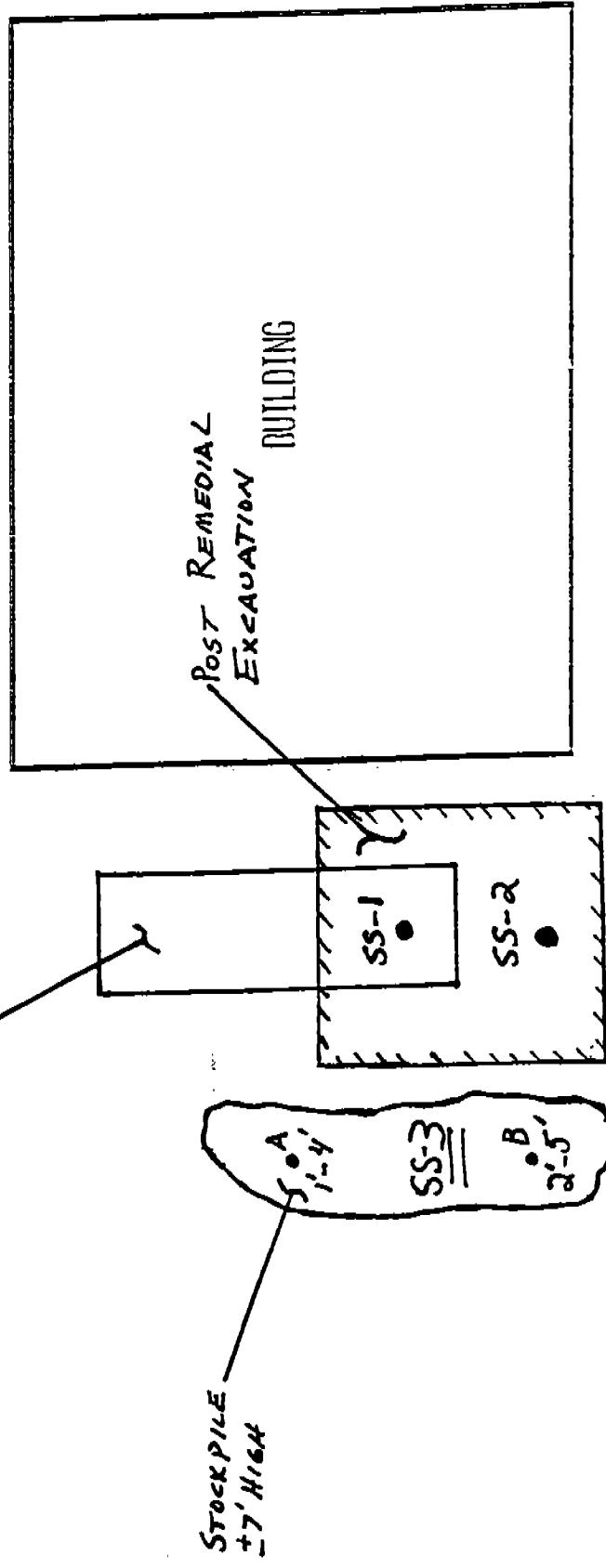
Project Manager EKL Job Number: C01339

Technician EKL Scale: as shown

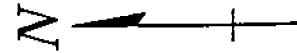
Reviewer M.L. FIGURE 3

By: EKL SITE MAP, POST-REMEDIAL ACTIVITIES

**ORIGINAL UST EXCAVATION**



Location	Sample Date (dd/mm/yy)	Sample No.	Sample Depth (feet)	TPH (5030) (ppm)	TPH (5030) (ppm)	Comments
North End Excavation	05/04/94	SS-1	13'	35.0	BDI	OVA = 50 units
South End Excavation	05/04/94	SS-2	13'	BDI	BDI	OVA = 60 units
Stockpiled Soils	05/04/94	SS-3	n/a	3296.0	BDI	n/a



APPROXIMATE SCALE



## **DEM Correspondence**



**Environmental Technology  
of North America, Inc.**

A HazWaste Company

April 28, 1994

Mr. Michael Linscott  
Division of Environmental Management  
Fayetteville Regional Office  
Wachovia Building, Suite 714  
Fayetteville, North Carolina 28301

RE: Approval To Treat Petroleum Contaminated Soils  
5031 Old Walkertown Road  
Winston-Salem, North Carolina

Dear Mr. Linscott:

Environmental Technology of North America, Inc. (ETI), is requesting our nineteenth approval to treat about 160 cubic yards of petroleum contaminated soils generated from former leaking underground storage tank (UST) which contained diesel fuel. The UST was 10,000 gallons in size and was located at the above address in Winston-Salem, North Carolina. Analytical results and the chain of custody for the soil within the excavation are attached. The oil sample collected from the contaminated soil was analyzed for TPH 3550 and TPH 5030. Results indicate that both parameters are above action limits.

The soils will be treated at the permitted bioremediation facility located off of Murchison Road, Fayetteville, North Carolina. ETI is performing this work for Norfolk and Western Railway Company (NW).

Please call me if there are any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael J. Lamore".

Michael J. Lamore, P.E.  
Vice President

/tam  
losure

Jerome Williams, Norfolk and Western Railway Company  
311-J SOUTH WESTGATE DRIVE • GREENSBORO, NORTH CAROLINA 27407  
TELEPHONE 910-299-9998 • EMERGENCY 800-228-SPUR  
FAX 910-299-0455

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ENVIRONMENTAL LABORATORIES, INC.  
11176 Downs Road  
Pineville, NC 28134  
704/588-5076  
FAX 704/588-2454

NC Certification Number: 305  
SC Certification Number: 99032

Date of Report: 04/18/94  
Date Received : 04/15/94

Approved By: Richard P. King  
Richard P. King  
Laboratory Supervisor

Client: Environmental Technologies, Inc.  
311-J South Westgate Drive  
Greensboro, North Carolina 27407

Contact: Mr. Michael Lamore

Customer Number: 1104

#### LABORATORY REPORT

ID: 640K01

Sample ID: MW-1 (5'-7') (NS-WALKERTOWN)

Parameter	Result	Limit	Unit	Method	Time	Date	Anal.
by 3550	1730	5	ppm	EPA 3550	11:30	04/05/94	FDM
by 5030	1270	1	ppm	EPA 5030	11:30	04/15/94	FDM

ID: 640K02

Sample ID: MW-1 (15'-17') NS-WALKERTOWN

by 3550	60	5	ppm	EPA 3550	11:30	04/05/94	FDM
by 5030	48	1	ppm	EPA 5030	11:30	04/15/94	FDM

ID: 640K03

Sample ID: B-1 (5'-7') NS-WALKERTOWN

by 3550	9	5	ppm	EPA 3550	11:30	04/15/94	FDM
by 5030	BDL	1	ppm	EPA 5030	11:30	04/15/94	FDM

ID: 640K04

Sample ID: B-1 (10'-12') NS-WALKERTOWN

by 3550	9	5	ppm	EPA 3550	11:30	04/15/94	FDM
by 5030	BDL	1	ppm	EPA 5030	11:30	04/15/94	FDM



ENVIRONMENTAL LABORATORIES, INC.  
11175 DOWNS ROAD  
PINEVILLE, NC 28134

Client: EEZ  
Address: 311-1 S. Limestone Street  
City: Greensboro  
Contact Person: EE. Env't Z  
Sampled By: EE. Env't Z

Phone Number: (330) 252-9250  
Fax Number: (330) 252-0655

Purchase Order Number: 4444-000000000000  
Project Name: EE - Nucleonics

Certification Requirement:  Yes  No No PSAs

Rush Charges Authorized  Yes  No No PSAs

By relinquishing this sample(s) to laboratory personnel, I warrant that I am authorized to enter into this agreement for the Client named above and that I authorize the below analysis subject to the terms and conditions on the reverse hereof.

This agreement is governed by the terms and conditions on the reverse side hereof. Analysis charges shall be as included in the Laboratory fee schedule, in effect at the time of the analysis.

Relinquished By: EE. Env't Z  
Received By: EE. Env't Z  
Relinquished By: EE. Env't Z  
Received By: EE. Env't Z

## CHAIN OF CUSTODY

Date: 11/15/94 Date: 11/15/94 Date: 11/15/94 Date: 11/15/94

Time: 0932 Time: 0932 Time: 0932 Time: 0932

Other Analysts: EE. Env't Z

Preservative: None

Samples received on ice? Yes  No

Autosampler: EE. Env't Z

Date & Time Sampled Lab ID

CLASS SOURCE

Sample ID

1111-1 (5-17') 4-17-94 (040) K1

1111-1 (5-17') 4-17-94 (040) K2

B-1 (5-17') 4-17-94 (040) K3

B-1 (5-17') 4-17-94 (040) K4

Flow \_\_\_\_\_ CF/GPD \_\_\_\_\_

Field pH \_\_\_\_\_ Result \_\_\_\_\_

Please sign and return the white and yellow copies

for the analyses.

NORFOLK AND WESTERN RAILWAY COMPANY  
110 FRANKLIN ROAD, S.E.  
ROANOKE, VIRGINIA 24042-0013

March 28, 1994  
File 7482.133

Mr. Larry D. Coble  
Regional Supervisor  
North Carolina DEHNR  
8025 North Point Blvd., Suite 100  
Winston-Salem, NC 27106-3203

Re: Underground Storage Tank System at Norfolk and Western Railway Co.  
Baker Lot, Old Walkertown Road, Winston-Salem, NC  
NW ID #'s 013-01IM, 013-02IM, 013-03IM

Dear Mr. Coble:

Norfolk and Western Railway Company (NW) received the Notice of Regulatory Requirements for the subject underground storage tank (UST) system on March 16, 1994. Please accept this letter as our written response within the twenty (20) days noted in Title 15A NCAC 2N.0703.

The source of contamination at this site has been removed by virtue of the removal of the subject UST system on October 3, 1990. Based on information contained in the Closure Report previously submitted to your office, it does not appear that groundwater was impacted by this reported release.

At this time, NW is in the process of engaging a consultant to perform a comprehensive investigation of the site and prepare a report which will address the extent of contamination from this release. We will plan to have this report in to your office within the 90 days indicated in the notice. If any difficulties are encountered with meeting this 90 day deadline, then either NW or our consultant will contact your office to discuss an alternate compliance schedule.

Please contact me at (703) 981-4994 if you have any questions or comments concerning the matters discussed herein.

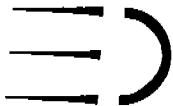
Sincerely,



Jerry B. Warren, P. E.  
Engineer Environmental Design

7482U133.077

## **Laboratory Transcripts**



# ENVIRONMENTAL DIRECTIONS

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MAY 13, 1994

EDI PROJECT: 1607

CLIENT: ENVIRONMENTAL TECHNOLOGY, INC.  
ADDRESS: 311-J SOUTH WESTGATE DRIVE  
GREENSBORO, NC 27407

PROJECT MGR: ERIC LINTZ

91-0299-0655

Project Name: OLD WALKERTOWN ROAD

Project No: 1339

MATRIX: SOIL

Sample Collection Date: 5/04/94

PO#: 13169

Laboratory Submittal Date: 5/05/94

EDI NO	SAMPLE ID	PARAMETER	RESULT	D/L
1607-1	SS-1 N. END EXC.	TPH-GC DRO 3550	35 mg/kg	10
		TPH-GC GRO 5030	<10 mg/kg	10
1607-2	SS-2 S. END EXC. (13')	TPH-GC DRO 3550	<10 mg/kg	10
		TPH-GC GRO 5030	<10 mg/kg	10
1607-3	SP-1 STOCKPILE	TPH-GC DRO 3550	3296 mg/kg	10
		TPH-GC GRO 5030	<10 mg/kg	10

< - Less than Detection Limit (D/L)

If you have questions regarding this data please call.

Beverly H. Dalton

Beverly H. Dalton  
Chemist

Phone: (910) 299-9998  
Fax: (910) 299-0655

No. 6068

104413164.

## CHAIN OF CUSTODY RECORD

PROJECT NO. 339	PROJECT NAME Old Wallace Town Rd	CHAIN OF CUSTODY RECORD									
		SAMPLERS: (Signature)	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	EDT	REMARKS	
SS-1	5-4-94	X	X	X	N. End Exc.	1	1607-1	Tongue 10K base			
SS-2	"	X	X	X	S. End Exc (13')	1	-2				
SP-1	"	X	X	X	Streckpile	1	-3				
SS-2A	"	X	X	X	S. End Exc. (14')	1	4	X Hold until further notice based on SS-2 results. X			
RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)			
<i>J. M. H.</i>	5-5-94 11:30	<i>J. W. D.</i> 5-5-94 11:30									
RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)			
<i>J. W. D.</i>	5/5/94 8:30										
RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED by Laboratory BY: (Signature)	RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)			
<i>J. W. D.</i>	5/6/94 8:30	<i>J. W. D.</i>									



ENVIRONMENTAL LABORATORIES, INC.  
11176 Downs Road  
Pineville, NC 28134  
704/588-5076  
FAX 704/588-2454

NC Certification Number: 305  
SC Certification Number: 99032

Date of Report: 05/17/94  
Date Received : 04/26/94

Approved By: Richard F. King  
Richard F. King  
Laboratory Supervisor

Client: Environmental Technologies, Inc.  
311-J South Westgate Drive  
Greensboro, North Carolina 27407

Contact: Mr. Michael Lamore

Customer Number: 1104

#### LABORATORY REPORT

LAB ID: 754K01

SAMPLE ID: MW-1

Parameter	Result	Det.	Limit	Unit	Method	Time	Date	Anal
Methyl Tertiary Butyl Benzene	BDL	5	PPB	EPA 8015	20:24	05/15/94	WHT	
Chlorobenzene	BDL	1	ppb	EPA 602	12:03	05/14/94	WHT	
1,2-Dichlorobenzene	BDL	1	ppb	EPA 602	12:03	05/14/94	WHT	
1,3-Dichlorobenzene	BDL	1	ppb	EPA 602	12:03	05/14/94	WHT	
1,4-Dichlorobenzene	BDL	1	ppb	EPA 602	12:03	05/14/94	WHT	
o-ethylbenzene	BDL	1	ppb	EPA 602	12:03	05/14/94	WHT	
oluene	BDL	1	ppb	EPA 602	12:03	05/14/94	WHT	
Total Xylenes	7	1	ppb	EPA 602	12:03	05/14/94	WHT	
naphthalene	BDL	10	PPB	EPA 610	08:30	04/29/94	FDM	
cenaphthylene	BDL	10	PPB	EPA 610	08:30	04/29/94	FDM	
cenaphthene	BDL	10	PPB	EPA 610	08:30	04/29/94	FDM	
luorene	BDL	10	PPB	EPA 610	08:30	04/29/94	FDM	
henanthrene	BDL	10	PPB	EPA 610	08:30	04/29/94	FDM	
anthracene	BDL	10	PPB	EPA 610	08:30	04/29/94	FDM	
luoranthene	BDL	10	PPB	EPA 610	08:30	04/29/94	FDM	
xrene	BDL	10	PPB	EPA 610	08:30	04/29/94	FDM	
enzo(a)anthracene	BDL	10	PPB	EPA 610	08:30	04/29/94	FDM	
rysene	BDL	10	PPB	EPA 610	08:30	04/29/94	FDM	
enzo(b)fluoranthene	BDL	10	PPB	EPA 610	08:30	04/29/94	FDM	
enzo(k)fluoranthene	BDL	10	PPB	EPA 610	08:30	04/29/94	FDM	
enzo(a)pyrene	BDL	10	PPB	EPA 610	08:30	04/29/94	FDM	
deno(1,2,3-cd)pyrene	BDL	10	PPB	EPA 610	08:30	04/29/94	FDM	

Environmental Technologies, Inc.  
05/17/94  
Page 2

LAB ID: 754K01

SAMPLE ID: MW-1

Parameter	Result	Det.	Limit	Unit	Method	Time	Date	Analysis	Anal.
Dibenzo(a,h)anthracene	BDL		10	PPB	EPA 610	08:30	04/29/94	FDM	
Benzo(ghi)perylene	BDL		10	PPB	EPA 610	08:30	04/29/94	FDM	





ENVIRONMENTAL LABORATORIES, INC.  
11176 Downs Road  
Pineville, NC 28134  
704/588-5076  
FAX 704/588-2454

NC Certification Number: 305  
SC Certification Number: 99032

Date of Report: 04/18/94  
Date Received : 04/15/94

Approved By: Richard P. King

Richard P. King  
Laboratory Supervisor

Client: Environmental Technologies, Inc.  
311-J South Westgate Drive  
Greensboro, North Carolina 27407

Contact: Mr. Michael Lamore

Customer Number: 1104

#### LABORATORY REPORT

LAB ID: 640K01

SAMPLE ID: MW-1 (5'-7') (NS-WALKERTOWN)

Parameter	Result	Limit	Unit	Method	Time	Date	Anal.
pH by 3550	1730	5	ppm	EPA 3550	11:30	04/05/94	FDM
pH by 5030	1270	1	ppm	EPA 5030	11:30	04/15/94	FDM

AB ID: 640K02

SAMPLE ID: MW-1 (15'-17') NS-WALKERTOWN

pH by 3550	60	5	ppm	EPA 3550	11:30	04/05/94	FDM
pH by 5030	48	1	ppm	EPA 5030	11:30	04/15/94	FDM

AB ID: 640K03

SAMPLE ID: B-1 (5'-7') NS-WALKERTOWN

pH by 3550	9	5	ppm	EPA 3550	11:30	04/15/94	FDM
pH by 5030	BDL	1	ppm	EPA 5030	11:30	04/15/94	FDM

AB ID: 640K04

SAMPLE ID: B-1 (10'-12') NS-WALKERTOWN

pH by 3550	9	5	ppm	EPA 3550	11:30	04/15/94	FDM
pH by 5030	BDL	1	ppm	EPA 5030	11:30	04/15/94	FDM



**Non-Hazardous Waste Manifests  
&  
Certificate of Acceptance**

# Environmental Technology of North America, Inc.

A HazWaste Company

## CERTIFICATE OF ACCEPTANCE

### Point of Origin of Contaminated Soil

5031 Old Walkertown Road  
Winston-Salem, North Carolina

Norfolk & Western Railway Company

Total Volume of Contaminated Soil 145 tons

Date Contaminated Soil was Transported May 25, 1994

Date of Acceptance of Soil by ETI Bioremediation Facility May 25, 1994

Disposal Location      Environmental Technology of North America, Inc.  
Bioremediation Facility  
6100 Murchison Road  
Fayetteville, NC 28305

- All soil contained virgin petroleum hydrocarbons.
- All soil was approved for treatment by bioremediation by the State of North Carolina.
- All petroleum hydrocarbons will be biodegraded to below state action limits and certified as clean by the State of North Carolina Department of Environment, Health, and Natural Resources.



<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of
3. Generator's Name and Mailing Address <i>Norfolk Southern Railroad WESTERN</i>				
4. Generator's Phone (703) 981 4994				
5. Transporter 1 Company Name <i>ENVIRONMENTAL TECHNOLOGY</i>		6. US EPA ID Number		
7. Transporter 2 Company Name		8. US EPA ID Number		
9. Designated Facility Name and Site Address <i>STI Bioremediation Facility 6100 Marchinton Road Fayetteville NC</i>		10. US EPA ID Number <i>PERMIT</i> <i>SRO600043</i>	A. Transporter's Phone 910-277-7998	
			B. Transporter's Phone	
			C. Facility's Phone <i>910-483-9012</i>	
11. Waste Shipping Name and Description			12. Containers No.	13. Total Quantity
a. Petroleum Contaminated Soil GENERATED From 5031 OLD WALKERTOWN RD			1	12 CY
b.			..	..
c.			..	..
d.			..	..
D. Additional Descriptions for Materials Listed Above			E. Handling Codes for Wastes Listed Above	
15. Special Handling Instructions and Additional Information				
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name <i>Jack Jones</i>		Signature <i>Jack B. Jones</i>		Month Day Year <i>5/25/94</i>
17. Transporter 1 Acknowledgement of Receipt of Materials				
Printed/Typed Name <i>MARSHALL COOK</i>		Signature <i>Marshall Cook</i>		Month Day Year <i>5/25/94</i>
18. Transporter 2 Acknowledgement of Receipt of Materials				
Printed/Typed Name		Signature		Month Day Year
19. Discrepancy Indication Space				
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.				
Printed/Typed Name <i>Jack B. Jones</i>		Signature <i>Jack B. Jones</i>		Month Day Year <i>5/25/94</i>

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of
3. Generator's Name and Mailing Address <i>Norfolk Southern Railroad WESTERN</i>				
4. Generator's Phone (703) 981 4994				
5. Transporter 1 Company Name <i>HUNT TRUCKING</i>		6. US EPA ID Number		
7. Transporter 2 Company Name		8. US EPA ID Number		
9. Designated Facility Name and Site Address <i>ETI Bioremediation Facility 6100 Marchinson Rd Fayetteville NC</i>		10. US EPA ID Number <i>PE244T</i> <i>SR0600043</i>	A. Transporter's Phone <i>910-488-9012</i>	
11. Waste Shipping Name and Description  a. Petroleum Contaminated Soil GENERATED FROM 5031 OLD WALKERTOWN ROAD		12. Containers No.	Type	13. Total Quantity <i>~ 22 cy</i>
b.		.	.	.
c.		.	.	.
d.		.	.	.
e.		.	.	.
D. Additional Descriptions for Materials Listed Above		E. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information				
6. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name <i>Jack Jones</i>		Signature <i>Jack B. Jones</i>		Month Day Year <i>5/25/94</i>
7. Transporter 1 Acknowledgement of Receipt of Materials				
Printed/Typed Name		Signature		Month Day Year <i>5/25/94</i>
8. Transporter 2 Acknowledgement of Receipt of Materials				
Printed/Typed Name		Signature		Month Day Year
9. Discrepancy Indication Space				

1. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name <i>Jack Jones</i>	Signature <i>Jack B. Jones</i>	Month Day Year <i>5/23/94</i>
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NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of	
3. Generator's Name and Mailing Address <i>Norfolk - Southern Railroad WESTERN</i>					
4. Generator's Phone (703) 981 4994					
5. Transporter 1 Company Name <i>Hunt Trucking</i>		6. US EPA ID Number			
7. Transporter 2 Company Name		8. US EPA ID Number			
9. Designated Facility Name and Site Address <i>ETI Disposal Facility 6000 Murchison Road Laytonsville MD</i>		10. US EPA ID Number PBR01T <i>SR0600043</i>	A. Transporter's Phone B. Transporter's Phone C. Facility's Phone <i>910-488-9012</i>		
11. Waste Shipping Name and Description  a. Petroleum contaminated soil GENERATED from 5031 OLD WAKERTOWN ROAD		12. Containers No. 1	Type D	13. Total Quantity ~22	14. Unit Wt/Vol CY
b.					
c.					
d.					
D. Additional Descriptions for Materials Listed Above		E. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information					
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.					
Printed/Typed Name <i>Jack Jones</i>		Signature <i>Jack Jones II</i>		Month Day Year 1 5 25 94	
7. Transporter 1 Acknowledgement of Receipt of Materials:					
Printed/Typed Name		Signature <i>Chad Jones</i>		Month Day Year 1 5 25 94	
8. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name		Signature		Month Day Year	
9. Discrepancy Indication Space					
10. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.					
Printed/Typed Name <i>Jack Jones</i>		Signature <i>Jack Jones</i>		Month Day Year 1 5 25 94	

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No.	Manifest Document No.	2. Page, if of,
3. Generator's Name and Mailing Address <i>Norfolk Southern Railroad &amp; Western</i>				
4. Generator's Phone (703) 981-4994				
5. Transporter 1 Company Name <i>Hunt Trucking</i>		6. US EPA ID Number		
7. Transporter 2 Company Name		8. US EPA ID Number		
9. Designated Facility Name and Site Address <i>ETI Bioremediation Facility 6100 MARSHINSON Road Fayetteville NC</i>		10. US EPA ID Number PERMIT <i>SR0600043</i>	A. Transporter's Phone	
			B. Transporter's Phone	
			C. Facility's Phone <i>910-488-9012</i>	
11. Waste Shipping Name and Description		12. Containers No.	13. Total Quantity	14. Unit Wt/Vol
a. Petroleum Contaminated Soil GENERATED from 5031 OLD WALKERTOWN ROAD		1	D ~22	cy
b.				
c.				
d.				
D. Additional Descriptions for Materials Listed Above		E. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information				
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name <i>Jack Jones</i>		Signature <i>Jack B. Jones II</i>		Month Day Year <i>5/25/94</i>
17. Transporter 1 Acknowledgement of Receipt of Materials				
Printed/Typed Name		Signature		Month Day Year <i>5/25/94</i>
18. Transporter 2 Acknowledgement of Receipt of Materials				
Printed/Typed Name		Signature		Month Day Year <i>5/25/94</i>
19. Discrepancy Indication Space				
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.				
Printed/Typed Name <i>Jack B. Jones</i>		Signature <i>Jack B. Jones II</i>		Month Day Year <i>5/25/94</i>

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of
3. Generator's Name and Mailing Address Norfolk Southern Railroad WESTERN				
4. Generator's Phone ( 703 ) 981 4994				
5. Transporter 1 Company Name Hunt trucking		6. US EPA ID Number		
7. Transporter 2 Company Name		8. US EPA ID Number		
9. Designated Facility Name and Site Address ETI Bioremediation Facility 6100 Murchison Rd. Fayetteville NC		10. US EPA ID Number PERMIT SR0600043	A. Transporter's Phone B. Transporter's Phone C. Facility's Phone 910-488-9012	
11. Waste Shipping Name and Description a. Petroleum Contaminated Soil GENERATED FROM 503/ OLD WALKERTOWN ROAD			12. Containers No.	13. Total Quantity
			D	222
b.				
c.				
d.				
D. Additional Descriptions for Materials Listed Above			E. Handling Codes for Wastes Listed Above	
15. Special Handling Instructions and Additional Information				

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

Jack Jones

Signature

Month Day Year

5/25/94

7. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

5/25/94

8. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

5/25/94

9. Discrepancy Indication Space

10. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Jack B. Jones

Signature

Month Day Year

5/25/94

## **Boring Logs**

ENVIRONMENTAL TECHNOLOGY OF NORTH AMERICA, INC.  
BORING LOG

Sheet 1 of 1

Soil Boring No. B-1 (Soil Boring 1)		Collar Elevation:		Location: 5031 Old Walkertown Rd. Winston-Salem, NC		
Project No. 1339		Project Name: Norfolk Southern Walkertown Rd.		Inspector: E. Ewald & E. Lintz		
Drilling Company: ETI		Foreman: E. Lintz		Start Date: 4/14/94	End Date: 4/14/94	
Drilling Equipment: IR A-200 w/4½" ID hollow stem auger		Boring Offset:		Weather: Sunny, 70°	Depth Completed: 17.0'	
D R I L L I N G      P R O C E D U R E S				GROUND WATER OBSERVATIONS		
				Date Time Level		
Depth From- To	Sample Number	Blows per 6"	Rec'd	Strata Change Depth	SAMPLE DESCRIPTION	Supplemental Observations (Time)
0' - 5'					Red silty clay with mica; no odor, some moisture. Poly in cuttings.	
5' - 7'	SS (5'-7')	1/1/3/4	2.0		Dark red micaceous silt; no odor.	OVA = 2 units
7' - 10'					Same as above.	
10' - 12'	SS (10'-12')	2/3/8/10	2.0		Red micaceous silty clay; no odor.	OVA = 20 units
12' - 15'					Lighter red micaceous silty clay. No noticeable odor.	
15' - 17'	SS (15'-17')	4/6/7/9	2.0		Same as above.	OVA = 1.2 units
G E N E R A L      N O T E S						Boring No. B-1 Sample Record
Total Depth = 17.0'						

ENVIRONMENTAL TECHNOLOGY OF NORTH AMERICA, INC.  
BORING LOG

Sheet 1 of 1

Monitoring Well No. MW-1 (Monitoring Well 1)		Collar Elevation:		Location: 5031 Old Walkertown Rd. Winston-Salem, NC				
Project No. 1339		Project Name: Norfolk Southern Walkertown Rd.		Inspector: E. Ewald & E. Lintz				
Drilling Company: ETI		Foreman: E. Lintz		Start Date: 4/14/94	End Date: 4/14/94			
Drilling Equipment: IR A-200 w/4½" ID hollow stem auger		Boring Offset:		Weather: Sunny, 70°	Depth Completed: 37.0'			
D R I L L I N G      P R O C E D U R E S				GROUND WATER OBSERVATIONS				
				Date Time Level				
Depth From- To	Sample Number	Blows per 6"	Rec'd	Strata Change Depth	SAMPLE DESCRIPTION		Supplemental Observations (Time)	
0' - 6'					Crusher run.			
6' - 3'					Dark reddish-brown micaceous silt; slight odor.		OVA = 3 units	
3' - 5'					Red micaceous silt with slight petroleum odor.		OVA = 20 units	
5' - 7'	SS (5'-7')	2/4/4/5	2.0		Red micaceous silt; noticeable petroleum odor.		OVA = >1000 units	
7' - 10'					Red micaceous silt.		OVA = 30 units	
10' - 12'	SS (10'-12')	5/6/10/20	2.0		Red clay with structures present; competant.		OVA = 3 units	
12' - 15'					Red clay with mica; odor.		OVA = 3 units	
15' - 17'	SS (15'-17')	3/4/5/5	2.0		Same as above.		OVA = 50 units	
17' - 20'					Same as above, slight odor.			
20' - 22'	SS (20'-22')	4/5/4/4	2.0		Tan sandy silt, no noticeable odor. Bottom of spoon had large chunks of quartz and asphalt		OVA = 48 units	
22' - 25'					Same as above, no odor.			
25' - 27'	SS (25'-27')	6/6/9/11	2.0		Reddish-brown saprolitic clay; no odor.		OVA = 34 units	
27' - 30'					Same as above; no odor.			
30' - 32'	SS (30'-32')	1/1/4/6	2.0		Micaceous silty sand with structures; saturated.		OVA = 72 units	
32' - 35'					Saturated silty sand; light reddish-brown with mica.			
35' - 37'	SS (35'-37')	1/3/7/8	2.0		Light brown saprolitic sandy silt; no odor. Granitic, saprolitic quartz, feldspar.		OVA = 5 units	
G E N E R A L      N O T E S							Well No.	MW-1
Total Depth = 37.0'							Sample Record	

## **Well Construction Diagrams**

**ENVIRONMENTAL TECHNOLOGY OF  
NORTH AMERICA, INC.**

311-J SOUTH WESTGATE DRIVE  
GREENSBORO, NORTH CAROLINA

Project Manager

EKL

**NWS**

**NORFOLK & WESTERN  
RAILWAY COMPANY**  
6031 OLD WALKERTOWN RD  
WINSTON-SALEM, NC

Technician

EKL

Reviewer

MJL

By:

EKL

**WELL CONSTRUCTION DIAGRAM  
MW-1**

Borehole O.D. = 8.25"

Casing O.D. = 2.25"

Type = Sch 40, PVC

Drilling Method = Hollow Stem Auger

